

REMARKS

Claims **2-6** are pending. Claim **1** has been cancelled without prejudice. Claim **2** has been amended into proper form to recite "a surface facing the second box" instead of "the surface facing the second box". No new matter has been introduced.

CLAIM REJECTION UNDER 35 U.S.C. § 112, SECOND PARAGRAPH

Claim **2** has been rejected for reciting "the surface" for the reasons noted at page 2 of the Office Action. In response, claim **2** has been amended to recite "a surface".

In view of the foregoing, Applicant respectfully requests reconsideration and withdrawal of the rejection of claim **2** under 35 USC § 112, second paragraph.

FIRST CLAIM REJECTION UNDER 35 U.S.C. § 103(a)

Claims **2-4** are rejected under 35 USC § 103(a) as being obvious over U.S. Patent 5,649,306, Vannatta et al (hereinafter "Vannatta") for the reasons noted at pages 2 – 3 of the Office Action. Applicant respectfully traverses this rejection for the reasons noted below.

With regards to the feature(s) of claim **2**, the Office Action asserts (at page 2, line 24 to page 3 line 8, and at page 6, lines 1-3) that Vannatta purportedly teaches that its antennas are in the same housing (box body). However, the Office Action asserts that the exact position of the antennas on the circuit board is a matter of design choice.

Independent claim **2** recites "the first antenna is provided in the vicinity of a front edge portion on the side opposite to a securing side of the first box body on the printed circuit board, and the second antenna is provided on a flip side of a surface facing the second box body on the printed circuit board when the first box body and the second box body are folded together."

The combined features of claim **2**, for example, provide that when the mobile terminal of claim **2** is kept in a state so as to face outwards against the human body, the mobile terminal can receive less interference by the human body. Hence, the directional antenna (provided on the flip side of the surface facing the second box body on the printed circuit board when the first box body and the second box body are folded together) can acquire sufficient receiving sensitivity as illustrated in the specification (at page 6, lines 5 – 12).

However, there is no disclosure, teaching or suggestion of the recited features of claim **2** in Vannatta. For comparison, Vannatta recites:

The second antenna may be implemented in several different manners, of which the following are a possibility. First, the second antenna may be of the type described in U.S. patent application Ser. No. 07/995,113 filed on Dec. 22, 1992. Second, as illustrated in FIG. 3, the second antenna may be a patch antenna 59 integrated into the battery housing 57 and coupled to the radiotelephone's radio circuitry via a transmission line 61. Third, the second antenna may be a patch antenna 59 integrated into the second housing element 53, as illustrated in FIG. 4. [(Vannatta at col. 4, lines 53-62.)]

In the preferred embodiment, the third antenna is a retractable whip antenna 63 as illustrated in FIG. 1-FIG. 4. However, any other sufficient antenna may be substituted for such an antenna, including: a helix disposed in the second housing element or a non-retractable whip antenna. [(Vannatta at col. 4, lines 63-67.)]

Further, Vannatta recites:

a second antenna disposed in the second housing element and operative when the first movable housing element is in the closed position; [(Vannatta at col. 7, lines 59-61.)]

a third antenna disposed in the second housing element, and operative when the first movable housing element is in the extended position and when the first movable housing element is in the closed position; ... [(Vannatta at col. 7, lines 62-65.)]

Moreover, Vannatta recites:

a first switch device operatively coupled to the first housing element, said first antenna, said second antenna, and the radio circuitry, said switch device selectively coupling one of said first antenna and said second antenna to the radio circuitry, wherein said switch device is responsive to the position of said first movable housing element for switching in said first antenna when the first housing element is in the extended position and for switching in said second antenna when the first housing element is the closed position. [(Vannatta from col. 7, line 66 to col. 8, line 9.)]

but does not recite whether its antennas (*i.e.*, of Vannatta) are directional or non-directional nor their location.

Claim 2 recites "a first antenna as an omnidirectional antenna; a second antenna as directional antenna;" and "the second antenna is provided on a flip side of a surface facing the second box body on the printed circuit board when the first box body and the second box body are folded together."

Vannatta does not disclose, teach or suggest "the second antenna is provided on a flip side of a surface facing the second box body on the printed circuit board when the first box body and the second box body are folded together."

Accordingly, Vannatta does not disclose a specific position of its antennas ostensibly in the same housing (box body).

Further, Vannatta does not disclose, teach or suggest whether any of Vannatta's antennas (ostensibly in the same housing (box body)) are directional or non-directional.

In summary, Vannatta does not disclose, teach or suggest **(1)** the requisite relative combination of positions of the antennas, and **(2)** that the second box body is rotatably secured to the first box body together with the requisite directional and non-directional characteristics of the antennas – as required by the rejected claims.

Additionally, Applicant respectfully submits that the rationale in "F. Known Work in One Field of Endeavor May Prompt Variations of it for Use in Either the Same Field or a Different One Based on Design Incentives or Other Market Forces if The Variations Would Have Been Predictable to One of Ordinary Skill in the Art" is being improperly used in support of this claim rejection. See Examination Guidelines for Determining Obviousness Under 35 U.S.C. 103 in view of the Supreme Court Decision in KSR v. Teleflex, 550 U.S. ___, 127 S. Ct. 1727, ___ (2007) of October 10, 2007.

To apply the examination guidelines properly, "Office personnel must resolve the *Graham* factual inquiries..." and "Office personnel must then articulate" their "finding that there were design incentives or market forces which would have prompted adaptation of the known device (method, or product); . . ." *Id.*

In sum, the disclosure of Vannatta lacks disclosure, teaching or suggestion of a directional antenna provided on the flip side of a surface facing the second box body on the printed circuit board when the first box body and the second box body are folded together – as recited in the rejected claims. Hence, without the requisite claimed features (of the rejected claims) being disclosed, taught or suggested by Vannatta, Applicant respectfully submits that no design incentives or market forces are applicable. Thus, Applicant respectfully requests the Examiner to reconsider the differences between claim **2** and the disclosure of Vannatta.

Also, claims **3** and **4** ultimately depend upon independent claim **2**. By their dependency, they necessarily include all of the features of their associated independent base claim plus their own recited additional features. Thus, Applicant respectfully submits that the 35 USC § 103(a)

rejection of these claims has also been overcome for the reasons noted above with respect to claim 2 and the deficiencies of Vannatta pointed out herein.

And for the record, Applicant has made no admissions regarding prior art or any submissions regarding prior art that may be incorrectly construed as noted (for example, at page 2, paragraph no. 4, line 17) in the Office Action.

In view of the foregoing, Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 2-4 under 35 USC § 103(a) over Vannatta.

SECOND CLAIM REJECTION UNDER 35 U.S.C. § 103(a)

Claims 5 – 6 have been rejected under 35 U.S.C. § 103(a) as being obvious / unpatentable over Vannatta in view of U.S. Patent No. 5,991,643 to Chao-Cheng (hereinafter “Chao-Cheng”) for the reasons noted at pages 3 – 4 of the Office Action.

Applicant incorporates herein by reference its remarks regarding the deficiencies of Vannatta with respect to rejected base claim 2 without having to repeat the same and applies those remarks to the instant rejection of dependent claims 5 and 6.

Claims 5 and 6 ultimately depend upon independent base claim 2. By their dependency, they necessarily include all of the features of the associated independent base claim plus their own additional recited features. With that said, Chao-Cheng does not rectify the deficiencies of Vannatta.

Thus, Applicant respectfully submits that the 35 USC § 103(a) rejection of these claims has also been overcome for the reasons noted above with respect to claim 2 and the deficiencies of Vannatta pointed out and applied to the rejection of claims 5 and 6.

Therefore, Applicant respectfully submits that claims 5 – 6 are patentable over Vannatta in view of Chao-Cheng. Accordingly, Applicant respectfully requests reconsideration and withdrawal of rejection of claims 5 – 6 as being patentable over Vannatta in view of Chao-Cheng.

THIRD CLAIM REJECTION UNDER 35 U.S.C. § 103(a)

Claims 2 – 6 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Vannatta over U.S. Patent Publication No. 2004/0046694 to Chiang et al (hereinafter “Chiang”) for the reasons noted at pages 4 – 6 of the Office Action. Applicant respectfully traverses this rejection for the reasons noted below.

Chiang purportedly discloses a three-element adaptive antenna array (paragraph 0051, FIG.33a-3C). However, Chiang does not disclose the above-noted features of base claim 2.

Applicant incorporates herein by reference its remarks regarding the deficiencies of Vannatta with respect to rejected base claim 2 without having to repeat the same and applies those remarks to the instant rejection of dependent claims 2 – 6.

Thus, it is respectfully submitted that Vannatta and Chiang do not disclose, teach, or suggest (whether applied alone or in combination) the above-noted features of claim 2. Further, claims 3 – 6 ultimately depend upon independent claim 2. By their dependency, they necessarily include all of the features of the associated independent base claim plus their own additional recited features. Accordingly, Applicant respectfully submits that the 35 USC § 103(a) rejection of these claims has also been overcome for the reasons noted above with respect to claim 2 and the deficiencies of Vannatta pointed out and applied to the rejection of claims 3 – 6.

Therefore, Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 2 – 6 under 35 U.S.C. § 103(a) as unpatentable over Vannatta in view of Chiang.

CONCLUSION

In view of the foregoing, the Applicant respectfully submits that the application is in condition for allowance. A notice to that effect is respectfully requested.

If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to contact the undersigned at the number indicated.

No fees are believed to be due. However, if any fees are required or an overpayment of fees made, please debit or credit our Deposit Account No. 19-3935, as needed.

Respectfully submitted,

STAAS & HALSEY LLP

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By: 

Ajay Pathak
Registration No. 38,266

1201 New York Avenue, NW, 7th Floor
Washington, D.C. 20005

Telephone: (202) 454-1594 (Direct)
(202) 434-1500 (Main)

Facsimile: (202) 434-1501

Attachments: Amendment and Amendment Fee Transmittal